

4p.

THIRD MONTHLY PROGRESS REPORT, ON
DEVELOPMENT AND TESTING OF ELECTROLYTE
MATRIX COMBINATIONS FOR
MERCURY-POTASSIUM FUEL CELL

(12 February-12 March 1963)

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PROGRESS OF WORK DURING THIS REPORTING PERIOD

The time-phased chart shown in Figure 1 indicates the progress during this report period. Progress is reported as follows by task.

TASK I

Compressive Strength Measurements on 6 μ Composites

The 34% electrolyte composite work is not complete and therefore no further data on this work is available.

Development of 1 μ Particle Composite

No further work completed, all effort is being expended on 6 μ composites.

TASK II

Conductivity Measurements and Allied Investigations

Conductivity measurements were completed for 31, 33, and 35% electrolyte composites. Further work on 34% composites will be accomplished as specimens become available.

Small Cell Testing

The first of the 2-in. diameter matrices was prepared for testing. First analysis indicates that the cell functioned for at least one hour before degradation occurred. This was apparent as indicated by a very unstable open circuit voltage.

WORK FOR NEXT REPORTING PERIOD

TASK I

Fine grain work will proceed.

TASK II

Another small cell will be tested using the first fine grain 2-in. diameter matrix if this material can be prepared.



REPORTS

The first quarterly technical progress report is being prepared for submittal by April 12, 1963.

CUMULATIVE MAN MONTHS EXPENDED

RESEARCH—7.2 Man Months to 12 March 1963, a balance of 16.8 Man Months for the remainder of the program

SHOP—0.5 Man Months, a balance of 1.5 Man Months for the remainder of the program

MATERIALS LABORATORY—3.3 Man Months, a balance of 8.7 Man Months for the remainder of the program

ORIGINAL BUDGET

- Research—24.0 Man Months
- Shop—2.0 Man Months
- Materials Laboratory—12.0 Man Months

